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THE ANGORA GOAT.

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INTRODUCTION.

The value of the 1909 clip of mohair in the United States was $901,597, nearly four times that of the clip of 1899. The number of

Fig. 1.—Angora buck.

fleeces of mohair reported in the census as shorn in 1899 was 454,932 against 1,682,912 for 1909. Of this latter number 1,077,463 were reported from Texas, 155,980 from New Mexico, and 141,588 from Oregon. Arizona and California each reported over 100,000 and Missouri was the only other State with over 20,000 fleeces of mohair

Note.—This is a popular paper suitable for present and prospective Angora goat raisers; it is especially adapted to the Southwest and the recently cleared portions of the North and Northwest.

in 1909. The average weight of the Oregon fleeces was 3.7 pounds and of the Texas fleeces 1.85 pounds. Many of the Texas Angoras are shorn twice a year, however, and the yield per goat is therefore undoubtedly much above the census figure for the average weight per fleece in that State. Estimating that one-third of the Texas goats are double shorn, it appears that the total number of goats of shearing age in the United States in 1909 was about an even million. This number probably includes all goats of shearing age having enough Angora blood to make shearing profitable.

During this same time there has been a decided drop in the number of sheep and beef cattle in America. The records made by the

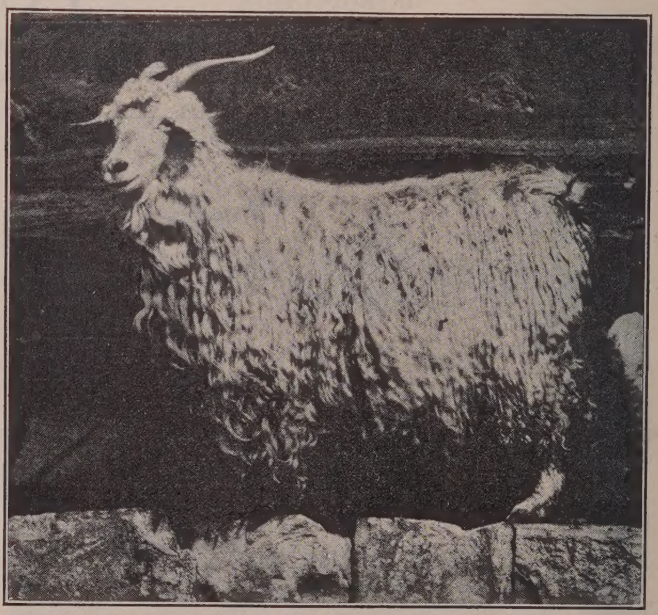

FIG. 2.—Angora doe.

Angora during the first decade of this century show up strongly in contrast with those of the other classes of live stock named. A few years ago the industry was largely localized in the Southwest, while now almost every State in America possesses its flocks. In the Northwest especially the Angora has found a veritable paradise in the large areas of logged-off lands with their humid climate, and this section is almost unrivaled for the production of high quality mohair. If these lands are allowed to grow up in brush they become a dangerous fire trap and are a menace to the surrounding country. The Angora eliminates this danger, helps to clear up the land, and returns a considerable income at the same time.

Accompanying the increasing esteem in which the Angora has been held as a clearer of brush land, there has been a steady increase in the price of mohair received by the grower. In 1908 the price ranged between 22 and 25 cents, while in 1913 it averaged about 34 cents per pound.

ORIGIN AND DISTRIBUTION.

The Angora originated in the vilayet of Angora in Asia Minor. This location and South Africa are to-day the two large foreign centers of mohair production.

The Sultan of Turkey passed an edict in 1881 prohibiting the exportation of Angoras, expecting thereby to confine the industry to Asia Minor and have a monopoly upon the mohair trade.

In 1901 South Africa also passed a law for the same purpose, which is usually referred to as the Angora export-duty act. This act provided for an export duty of £100 ($486.65) on each Angora goat exported. Since that time importations have been entirely prohibited.

It was feared for a time that prohibiting the importation of breeding stock would have a bad effect upon the industry in America, but later evidence has indicated that some of the best blood had already been brought to the United States and that deterioration apparently does not take place here, as experts say that the best American product is equal to the best grown in Turkey or South Africa.

Faith in the excellence of American Angoras has been demonstrated by other nations, as quite a number of exportations have been made from the United States. In 1894 six Angoras were exported to South Africa from California and the next year 20 bucks followed for $1,000 cash. Canada, Alaska, and some of the Pacific Islands also have flocks that came originally from California. Recently exportations have been made to Brazil and Argentine Republic.

The Angora was evidently bred pure in Asia Minor for many years previous to the last half century. About 50 years ago they were largely crossed upon the common Kurd goats of the district. Some authorities give their opinion to the effect that not a flock escaped the influx of Kurd blood. This has generally been considered a very harmful proceeding, and many hold that kemp in the Angora's fleece is still an outward sign of the presence of this foreign blood.

The Angora, as brought from Turkey, was considered too small for American purposes and was largely crossed upon the common goat. One eminent Angora authority has said that he doubted whether there was a purebred Angora in America. This statement is probably a little overdrawn, as other well-known Angora breeders claim that some flocks have been kept entirely pure, but undoubtedly crossing was at one time a very common practice. The purposes were to

obtain a larger, hardier animal, and to increase the breeding stock. This has largely been accomplished and it is the general opinion that the American Angora is better suited to local conditions and gives wider satisfaction than the original could ever have done.

DESCRIPTION OF THE AMERICAN ANGORA.

The Angora, as bred in the United States, is almost always pure white, but occasionally a black one appears. Some profess to see in this the cropping out of impure strains of blood. Both sexes are usually horned, but polled individuals occur. The ears are either partially erect or pendulous. The body should be built upon lines denoting a good constitution and should be symmetrical. The fleece should cover all parts of the body except the inside of the upper part of the legs; should be of fine quality, closely curled, of a high luster, and as nearly as possible free from kemp.

IMPORTANCE OF THE ANGORA.

New uses are constantly being found for the Angora. Their value in clearing up brush lands has been mentioned in the introduction, but it is worthy of more extended discussion. It is estimated that there are 3,000,000 acres of logged-off lands in the Northwest that could be profitably converted into homesteads. Already many fields in this section have been enabled to smile under bountiful harvests made possible by the repeated browsing off of the brush by the Angora. Many settlers who have developed farms in this section are loud in their praises of the Angoras and attribute their rapid progress to the use of this animal.

The following indicates a new use to which the Angora has been placed in the West.

Angora goats to prevent forest fires.—In order to keep the fire breaks on the southern California forest reserves clear of weeds, an ingenious plan has been put into operation which will save the Government thousands of dollars and incidentally provide forage for large herds of Angora goats. The plan was originated by Forest Supervisor R. H. Charlton, of Los Angeles, and provides for free grazing for a herd of 600 goats on the reserve. They were shipped into the State from Arizona and allowed to roam at will over the parts of the range where their services are required. Their help to the forest rangers is in keeping down the growth of weeds, grass and small shrubs on the strips of cleared land, known as fire breaks, which follow the ridges through the forest and serve to check the spreading of forest fires. These fire breaks are of little value unless all such growth is kept down, as the weeds and grass dry up in California summers and would carry the flames across the clearings. The goats feed close, keeping the fire breaks bare of vegetation, and thus do the work of gangs of laborers. In this way the Government's pay roll is kept down, while the owners of the goats are provided with free grazing for their herds.

The Interurban Railway Company between Seattle and Tacoma recently purchased a band of Angoras to keep their right of way clean

and attractive. The above two are simply examples of a general type that may suggest local uses to which the Angora might be suitable.

It should not be thought that the West is the only part of the country where the Angora will fit in. In the Central West, many pasture fields that have "grown up" while other stock was being pastured upon them could be reclaimed and made to carry more stock by their use. In the South there are also many abandoned fields that might profitably pasture a band of Angoras and gradually be made ready for cultivation.

While the Angora will get along upon grass and weeds it is more satisfactory to have browse in connection with these. Browsing

FIG. 3.—Fire breaks in a Western forest region kept clean by the use of Angoras. The breaks extend along the top of the ridges and are indicated by the light zigzag line at the right of the picture.

is the natural way for them to feed and they do not generally give the best results unless they have access to a certain amount of brush, etc. However, it should be stated that rough brush land is not suitable for growing extra long mohair, especially after the fleece is about 6 inches long.

The question as to whether goats can be pastured with other live stock can be answered in the affirmative. Their presence is in no way objectionable to cattle and sheep. In the case of the latter a few goats are often allowed to run with the flock for the purpose of keeping the dogs away. It is doubtful whether this purpose is accomplished, as there are instances where the goats themselves have been killed, but it illustrates the point that the sheep and goats feed together satisfactorily.

Allowing goats to run with horses is not objectionable to the latter, but there is danger of the goats being kicked. Accordingly, this plan does not give very great satisfaction. This is even more true with jacks and young mules. Pasturing with hogs is generally impractical because of the danger of the hogs devouring the young kids.

Regarding the number of goats that can be pastured per acre, only general figures can be given. The soil, length of pasture season, the climate and whether the pasture is to be permanent or the goats turned in merely to clean up the brush are some of the factors deciding this. There are sections unsuitable for cultivating purposes where it might be desirable to pasture the goats year after year. Eating off the browse too closely would kill it, hence it is desirable under these conditions to have several fields that are pastured for short periods in rotation. Even then the goats will often peel the brush and gradually destroy it.

For cleaning up brush land for other agricultural purposes from two to five goats per acre from two to four years will usually do the work. It has been asserted that the Angora can eat all kinds of poisonous plants without ill effects. They naturally feed upon a wide variety of vegetation, browsing a leaf here and another there and the amount of the poisonous plants consumed at any one time is usually small. No bad results would be likely under these conditions. There are other records of where hungry goats have been turned in upon fields containing little else than poisonous plants and of large numbers dying because of having eaten heavily of them. This has been found true of the laurel plant especially. Green brier has also been found objectionable but from another standpoint. This applies especially to goats with considerable length of fleece. They become entangled among the vines and frequently die, being unable to free themselves.

VALUE AND USE OF MOHAIR.

It has often been said that the Angora works and pays for its board at the same time. The value of the fleece or mohair is considerable and is increasing. The ideal fleece should possess length, quality or fineness, luster, strength of fiber, freedom from kemp, and it should be closely curled but not kinky. Mohair is made into plush for railroad cars and upholstering furniture. It is also used for automobile tops, coat linings, dress goods, men's summer suits, braids, rugs, carriage robes, imitation furs, couch and table covers, sofa pillows, portieres, and curled false human hair. For a number of years the price of mohair varied between wide limitations, depending upon the decree of fashion, but during the past few years there has been a steady increase in price, undoubtedly caused by the more extended use of the article, and fashion no longer plays an important rôle in determining its value.

The weight of fleece for American Angoras ranges from 2 to 12 pounds. The average weight of fleece has been placed at 2½ pounds for one year's growth. Shearing once a year is practiced, except in the Southwest. Here climatic conditions are such that the Angoras often shed their fleeces if not clipped twice, hence they are usually sheared both in the spring and fall. Where the fleece is allowed to grow for 12 months the average length is about 10 inches. The total production of mohair in the United States for 1913 will probably approach 5,000,000 pounds. The best of it comes from the Northwest. In Oregon, Polk County leads and the product of this county has sold for from 42 to 55 cents per pound for the past few years. The Northwest Angora Goat Association reports an average cash production of about $1.75 per head, with many flocks averaging as much as $2.25. From superior flocks of California and Oregon it is not unusual to get 15 to 20 inch staple in one year's growth. In Texas and New Mexico much mohair falls under the 6-inch standard (because of shearing twice a year), which is the shortest length generally desired. The short product is largely responsible for the lower average quality of American mohair. The Southwestern product shrinks heavier than that from other sections. This is especially true of the Arizona and New Mexico product, but some Texas hair shrinks as light as 5 per cent. California mohair often has a characteristic reddish cast.

Notwithstanding the large domestic production about 2,000,000 pounds of mohair are annually imported into the United States. The imported mohair is of better quality than the average American product. If the practice of clipping twice a year could be abolished, the difference in quality would probably largely disappear, as these short fleeces reduce the average quality to a considerable extent. The shrinkage of American hair is said to average more than that imported, but some American authorities dispute this statement. The shrinkage is estimated at from 12 to 15 per cent. The shrinkage of Arizona and New Mexico mohair is largely due to dirt, etc., while that of the Oregon hair is caused by natural grease. In most cases the foreign mohair is blended with the American product and spun in this manner. The aim for future advancements in this industry should be toward increasing the average quality rather than the quantity of mohair produced. There need be no discouragement in this, as it has already been said that the best mohair of this country is equal to any produced. Another word of encouragement spoken by competent authorities praises the marked improvement that has already taken place in American mohair, both in the matter of quality and freedom from kemp.

The best mohair comes from the kids, the young wethers, and does. As the goats grow older the hair becomes coarser and gradually loses

its luster and curling qualities. The production of extra long mohair, from 12 to 24 inches, has been the subject for considerable discussion of late. This quality of goods is used for making false hair, etc., and sells for a much higher price than the ordinary grades. A notable instance is the one of the fleece of Romeo, sweepstakes buck at the El Paso show in 1910. It weighed 18 pounds, measured 20¾ inches in length, and sold for $115. This quality of hair could not be grown, however, under average conditions. It could not be produced upon rough brush land nor under any conditions where feed and care were not the best. In the Southwest it would be difficult to produce it, on account of climatic conditions, yet some breeders have succeeded in producing an excellent quality of fiber in this section.

As a rule, the extra long fleeces must be allowed to grow for a longer time than 12 months. Some authorities claim that certain non-shedding goats are essential for the production of the extra long fleeces; others dispute this, maintaining that care, food, and climatic conditions are the deciding factors.

CARE OF FLEECE.

Mohair fleeces should not be tied, but should be rolled up, cut side in, and packed in suitable bags. Bags that have previously been used for wool should never be used, as the wool fiber that adheres to the sides becomes mixed with the mohair. It will not take the dye used for mohair, and is the source of considerable trouble in the manufactured goods.

A great deal of American mohair is sold direct to the mills by the producer. Quite often it is pooled, and the growers of the Northwest have realized considerably better prices by this method of sale. Commission men also handle this product. Some of the principal mills in this country are the Sanford Mills, Sanford, Me.; the Massachusetts Mohair Plush Co., Lowell, Mass.; the Queensbury Mills, Worcester, Mass.; and the Multnomah Mills, Portland, Oreg.

The skins of Angoras with the hair attached are sometimes tanned for rugs and carriage robes. This material is also used for making muffs, trimming coats, etc. It makes a very attractive "fur." With the hair removed, the skins are also tanned and made into leather. This is not suitable for the production of kid gloves or shoes, but is sometimes made into morocco and similar grades, the poorer product being used for the manufacture of workmen's gloves.

ANGORA MUTTON.

The flesh of the young Angora is delicious, although there has been a prejudice against its use. Kansas City is the leading goat market in America. Two classes of goats are offered for sale, designated as "fat" and "brushers." The fat class are those in condition for

slaughtering and the "brushers," as their name would indicate, are stockers of the caprine family. The average weight of goats at Kansas City is 68 pounds.

Because of the prejudice against Angora mutton it has been almost invariably passed over the counter as lamb. In Oregon a law has been passed making it necessary to properly label the carcass. That the Angora will not suffer from this is evinced by the fact that the carcasses have previously sold as lamb and that the consumer has been unable to detect any difference. As soon as the excellence of Angora mutton is more commonly appreciated it will undoubtedly be in greater demand and its value will be enhanced accordingly.

FIG. 4.—An Angora flock in the Northwest.

ADAPTABILITY OF ANGORAS.

So far as temperatures are concerned the Angora should flourish in any part of the United States. In Turkey and South Africa the ranges in temperature are almost if not quite as great as those of the United States. It is claimed that the coldest weather will not affect them, provided it is dry. In Montana the goats are undaunted by the heavy snowfalls so long as they have a dry place for the night.

In Texas, New Mexico, and Arizona the high temperatures make it necessary to shear the goats twice a year but the heat has apparently no ill effects upon the health of the flocks.

Wet and swampy land, wherever it may be, is unsuitable for Angoras. The native home of all goats is upon the high hills and mountains and their preference for altitudes is still manifested by their ascending to the highest available point, if it is only the feed trough. (Fig. 4.)

Well-drained land and pure water are very essential for the health of the flock. The fact that these conditions are common to considerable portions of this country, and that flocks of Angoras are to be found in almost every State, would indicate that the country as a whole is fairly well adapted to the Angora industry. However, a closer scrutiny of the conditions will show that some sections are especially favored and that the industry will probably always be largely confined to these. The large areas of new lands, the comparative low values of these, and the almost ideal climate have combined to create and maintain the industry in the Willamette Valley and the surrounding country, and the great amount of cheap range lands in Texas, Arizona, and New Mexico has fostered it in the Southwest.

BUILDING UP A FLOCK.

As mentioned before in this bulletin, when Angoras were first brought to America, considerable crossing was practiced with the common goat. At that time breeding stock was scarce and it was necessary to increase the supply by any practical means. It was found that the first and second crosses upon the common goat produced little mohair and a large amount of kemp and that it was necessary to cross with a pure Angora five or six times before a really superior animal could be produced. In the past the fifth cross has been considered to produce a purebred. Beginning with common does and crossing with Angora bucks was necessary at the beginning of the industry, but it would no longer be profitable to start a flock in this way. It would be far better to buy a few purebred Angoras outright and develop a flock from these by the natural increase.

MANAGEMENT OF THE FLOCK.

Contrary to a formerly common opinion Angoras need considerable care and personal attention. The kids are especially in need of this and if it is denied them a large mortality among them often results. For this reason it has been found inadvisable to turn them out with the does before they are 6 weeks or 2 months old.

Sheds or other shelter must be furnished both the adults and the young and if the country is infested with dogs or wild animals a dog and wolf proof fence should be built about the pasture. The expense of this will be repaid in a few years.

The management of a flock of Angoras does not differ radically from that of a flock of sheep. It is not considered necessary to have a herder constantly present with the flock. A dog is often sent out to herd and guard them, the herder riding out two or three times during the day to note the direction of the flock and to see that they do not roam too widely

BREEDING.

The age at which the does should be bred has an important bearing on the welfare of the flock. The general opinion prevails that if they are forced to bear the burden of reproduction before they are 18 months old their growth will be stunted. Neither is it regarded advisable to use the bucks for breeding purposes before they attain this age.

The goats are supposed to be in their prime when from 2 to 6 years of age, but they have been known to reproduce regularly up to the age of 15 years. It does not generally pay to keep them too long, as the mohair becomes continually coarser with advancing age.

The does come in heat during August and September. The bucks also have a period of heat, but it usually starts sooner and lasts longer than that of the does. The time the does should be bred depends upon the climate. The kids are not so hearty or able to take care of themselves as lambs. If they come early and have not proper shelter and care a great many of them will die if the weather is cold and wet. A single bad night has caused the loss of 50 per cent of the kid crop in flocks of the Southwest where the shelter was insufficient.

The number of does a buck will cover satisfactorily depends upon the vigor and fertility of the individual and the care and food received. From 40 to 50 is a common average. The gestation period is from 147 to 155 days, or 5 months, as it is more commonly expressed.

NUMBER OF KIDS.

The does usually drop single kids, twins being rather uncommon. The Tariff Board found that the kid crop in the flocks investigated was about 65 per cent. Some authorities hold this figure too low. It is certain that in some well-managed flocks the average is from 100 to 120 per cent. A record of extraordinary fecundity is the one of a doe that produced twins, quadruplets, and triplets in three successive seasons.

FEEDING.

It is a good plan to feed a little heavier previous to kidding to start the milk flow. A small amount of grain is often desirable. It is not meant by this that the goats should be underfed at other seasons of the the year. Some people have been of the opinion that all that is necessary for the Angora is to turn them out in the winter, regardless of the depth of snow. They can not be expected to browse under these conditions if they can not reach the twigs. Some breeders cut down the high trees and this makes very satisfactory browsing, but other feed, both hay and grain, is necessary, especially in northern climates, if good results are to be expected. Flocks have been wintered out, however, without artificial feeding as far north as Nevada.

Angoras are very particular about the cleanliness of their feed and if it be pulled out of the manger and trampled under foot they refuse to touch it. For this reason it is considered the better plan to have an opening in the manger large enough to permit the entrance of the goat's head rather than to make it small, thus necessitating the pulling out of the hay in bunches with a large part of it falling upon the ground.

SHEARING.

In the Southwest shearing is done during February and March in the spring and the fall clip is removed in September or October. In other sections shearing usually takes place during March and April. It should be done before shedding begins, but it should not

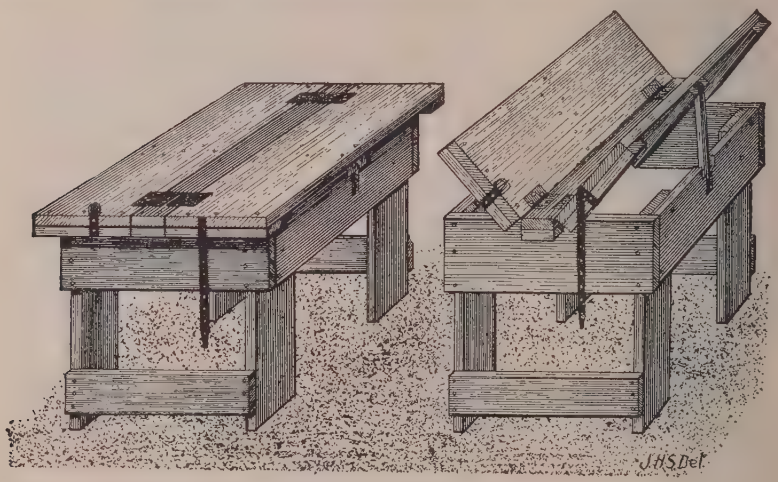

FIG. 5.—Conbination shearing trough and table.

take place too early or the goats may suffer severely from the cold. Both hand shears and machines are used, but shearing by the latter means has increased rapidly during the last few years.

Goats are not so gentle in the hands of the shearer as sheep, and many men, especially beginners in the industry, are anxious to know how best to handle them during the operation of shearing.

The late F. W. Ludlow, of Lake Valley, N. Mex., devised a shearing table which has proved to be of great service. It is a collapsible trough, or combination table and trough.

Mr. Ludlow's description of this table is given herewith:

> The table is simple in construction. It is about 22 inches high, 2 feet 10 inches long, and 21 inches wide. The top is composed of two 9-inch sides, which are hinged to the 3-inch centerpiece. On the lower side of these movable flaps is a narrow piece 8 inches long, which catches on the framework of the table when the sides are lifted and holds them stationary. When the sides are elevated the top of the table forms a

trough 3 inches wide at the bottom and possibly a foot wide at the top. Into this trough the goat to be shorn is thrown, feet up. A small strap, which hangs from the end of one of the sides, is run over the goat's neck and fastened to the other side. The goat's head is hanging over the end of the table and the strap prevents it getting free. The belly and legs are then shorn. The legs of the goat are then tied together, the strap removed from the neck, and the sides of the table dropped, so that one has a plane surface on which to shear the rest of the animal. An untrained man can shear 100 goats a day with a shearing machine and such a table.

THE KIDDING SEASON.

The kidding season is an important one upon the Angora farm, and problems are presented that are often puzzling, especially to the

FIG. 6.—Group of Angora kids.

beginner. The following two methods of handling the flock as desrribed by a western breeder have given quite general satisfaction.

The corral method.—This method may be used with any number of goats. With various modifications and adaptations which best suit the size of the flock, the climatic conditions, the facilities for feeding, etc., it may be used by the beginner with success. We have practiced this method in Nevada for more than 25 years. If the herd is a large one, say 1,000 head, three men are required to handle the goats at kidding time. The service of the bucks is so managed that the kids will be dropped gradually through several weeks. At the height of the season we expect from 75 to 100 kids a day. The season lasts about 30 or 40 days. Fortunately, most of the kids are dropped in the daytime.

We have four or five small corrals fenced with 36-inch woven wire and large enough to hold 50 does and their kids. The doe should be allowed plenty of room, because if too close to her neighbor she may adopt the other doe's kid. Besides these small corrals, two large ones are needed, each large enough to hold 1,000 does. Along the fence of one of these corrals are a dozen small pens just large enough to hold a doe and kid. At the gate of this large corral a jump board is placed. This jump board is

intended to keep back those kids which are not large and strong enough to jump over it. A 2-inch board about 18 inches high will answer the purpose. Another device sometimes used is a platform open at the end, so that the kids may run under it, and thus avoid being trampled upon when the goats are going out over the platform.

The small corrals may be made of panel fence and located in a meadow where some feed is afforded. The does should always have some kind of feed at kidding time.

In the morning the flock is carefully examined, and all does which show signs of kidding during the day should be separated and placed in one of the small corrals. The large flock is now turned out, and one of the men is sent with them with instructions to take the herd at once as far as he intends to go for feed that day, and then to let them feed over a limited area and gradually work their way home. A few does will drop their kids on the range, and the herder should carefully note the number and their location. He should see that the herd does not feed around one of these does, as she is apt to leave her kid and join the band, thus necessitating much extra work in finding the kid and in giving it to its mother. Early in the afternoon the band is placed in one of the large corrals. Now, the herder and another man go out with a wagon or on foot and carry the kids home, gently driving the mothers. The kids should not be handled or rubbed against one another more than is necessary, as the doe knows her kid by the scent. These does and kids are placed in the small corral which contains the does held back in the morning with the expectation that they would kid during the day. We now have one day's kidding in one of the small corrals. The does and kids should be watched to see that they are properly arranged. Do not bother them more than is absolutely necessary. Do not be in a hurry to make a doe own a kid. Do not drive the goats around one of the small pens.

The does should remain with their kids in the corral for a day or two at least, or until the kids are properly mothered. Any does which have not kidded should be taken out. The next morning any kids which may have been born during the night are put in another small corral with their mothers, as well as the does which are expected to kid during the day. The procedure of the previous day is repeated. In about three days, if one has limited quarters, the first day's mothers and kids may be put in the second large corral—that is, the one with the jump board at the gate. Now this "wet" band is placed in charge of one of the men and sent out to feed. The gate is opened, the mothers passing out over the jump board, and the kids remain in the corral. The herder must not range his goats near the does that are kidding upon the range, and he should be cautioned to come in later than the "dry" band, so as to avoid any possibility of their mixing. When his band arrives at the corral, the gate is opened and each mother hunts for her kid. Some of the kids may not find their mothers, and if after a day or two there are a few unnourished kids and some does with overdistended udders they should be placed together in the small pens along the side of the corral. The doe will own the kid in a day or two whether she is its mother or not. The kids should not be allowed to become too weak before this is done. If one does not have enough small pens a doe may be held while two or three kids suckle her, and thus tide them over until some of the small pens are vacant.

The next day the second day's kidding is added to the wet band. The wet band thus gradually grows, while the dry band decreases. During the day two men will be employed at herding the dry and wet bands, respectively, and the third man will be kept busy inspecting the kids, feeding the does in confinement, etc. If the weather is stormy, some of the kids will have to be sheltered. The advisability of having kids dropped gradually through a period of 30 or 40 days will readily be seen. If help is inexperienced, thay may be gradually trained, or if the weather is stormy there will be time to get all things arranged properly.

The kids should not be allowed to go with their mothers until they are about 6 or 8 weeks old. If they go before this, they will probably become tired very soon and go to sleep. When they awake, the band will have gone and they are liable to be lost.

During the day, while the mothers are feeding, the kids would eat a little grass if they could be herded near the corral.

As stated before, there may be many modifications of this method which will suggest themselves, but the above is a general outline of a method commonly in use.

The staking method.—This method is largely employed, even with large flocks, in New Mexico, but is possibly best suited to small flocks. It is without doubt the best method for certain surroundings. About the same amount of help will be required as with the corral method. There should be a good supply of stakes similar to tent stakes. There should also be a supply of swivel blocks which are about 4 inches long and having a hole bored near each end. A piece of rope about 6 inches long is fastened to the stake and the other end is passed through one of the holes in the swivel block and a knot tied in the end. Another piece of rope of equal length is likewise knotted and passed through the other hole of the swivel block, the loose end being tied to the kid's leg. Any swivel will take the place of this primitive method. The herder or owner can busy himself during the winter months by making stakes and swivels and by cutting and attaching the ropes.

When a kid is born it is taken to a convenient place to stake, and the mother is gently coaxed to follow. The stake is securely driven into the ground, and the kid fastened to it by the hind leg. The mother is left with the kid in order that she may know where to find it upon return from feeding. The kid should be staked where he can get plenty of sunshine, shade, and shelter. A small bush, a post, or a box will answer the purpose admirably. If there are twins, they must be so staked that they can suckle at the same time. The rope should be changed from one hind leg to the other occasionally to prevent unequal development. Sometimes a vigorous kid gets thoroughly tangled and requires help.

The kid may thus be left staked until he is old enough to go with the flock, which is after six or eight weeks, or he may be put in a corral after a few days, as is done in the corral method.

There are many successful breeders who use this method entirely. One may expect to get good results if he follows either the corral or staking method carefully.

There is very small loss among kids cared for as set forth above. Many of the breeders on a large scale report the percentage of increase as 100. This does not mean that every kid lives, but that so few die that the loss is offset by the number of twins that are dropped.

The most practicable fencing to be used at kidding time is made of portable panels. By the use of these panels a pen may be made large or small, and be moved from one place to another without difficulty and with very little work.

Does will occasionally refuse to own their kids. In such cases they should be tied up and compelled to allow the kid to suck. Small claiming pens are handy for these unmotherlike creatures. Tying a dog near them has had the effect of inducing them to mother their offspring sooner than they would have otherwise done.

CASTRATION.

All buck kids not intended for breeding purposes should be castrated when from 2 to 4 weeks old. This is best accomplished by cutting off the lower third of the scrotum with a sharp knife, forcing down the testicles one at a time with the thumb and forefinger of

one hand and pulling them out with the spermatic cord attached with the other hand. A good firm grip should be taken so that one's fingers do not slip off. A 3 to 5 per cent solution of creolin or carbolic acid will keep out infection and repel the flies.

WEANING.

Kids should be weaned when from 4 to 5 months of age. Buck kids older than 5 months should never be allowed to run with the does, as they will often breed, beside causing endless annoyance to the does.

ASSOCIATIONS.

The American Angora Goat Breeders' Association was organized in 1900. This association up to the present time has recorded about 50,000 animals. Mr. R. C. Johnston, Lawrence, Kans., is the present secretary. There can be no doubt but that the association has done the industry a great deal of good. There has been considerable agitation in favor of an advanced registry, based upon superiority of the animals entered, but it is not possible to say the exact form this movement will take.

Other associations for the promotion of the Angora goat and the mohair industries are the National Mohair Growers' Association, founded September 23, 1909, and the Northwest Angora Goat Association, which came into existence January 8, 1910.

SCORE CARD FOR ANGORA GOATS.

There is no official American score card, but the following has been suggested by prominent breeders.

	Per cent.
Physical animal 25 per cent, subdivided as follows:	
Size and constitution	15
Shape of body, head, horns, ears, etc., deducting for black spots on skin, colored hair, black streaks in hoofs, horns, etc., up to 10 points	10
Fleece 75 per cent, subdivided as follows:	
Must be soft, silken, velvety, with small compact ringlets	30
Must be of eveness in length, density, and growth 1 inch or more per month, which gives weight	20
Freedom from kemp	15
Luster	10
Total	100

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